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would have benefited "de monk." They had cost him "notin';" but "de monk? Thirty dollar!" Even practical Mrs. Tony forgot her "one time, one trouble." This was too much trouble. To her this was worse than death. Not only was he a "thirty-dollar" monk, but he went out with the organ and got the pennies. The case was an important one. The "doctor lady's" treatment, however, was simple. She merely covered his cage with one of Mrs. Tony's skirts and prescribed plenty of milk and water.

For two or three days Tony sat on the stone steps the picture of misery. His parting question daily was, "You come an' see de monk to-morrow?" The baby was very, very ill, but, poor little thing, he belonged to the "no-cost-me-notin'" class and did not count for much.

Shaver's Alley is a thing of the past. "De monk" and his family have moved to other quarters. But the "doctor lady" never passes the place where Shaver's Alley used to be without thinking of the "thirty-dollar monk" and the valueless children.

ELECTRICITY AS A REMEDIAL AGENT IN NERVOUS DISEASES

BY ALICE LUCAS

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MORE and more as the prejudice against the internal administration of drugs has come into vogue have nerve specialists and doctors in general substituted other methods as remedial agents in nervous diseases. The fact that many cases of nervous trouble may be due to the taking of drugs, or through loss of weakened bodily or mental force acquire the habit, has made wideawake thinkers look for some natural, rational, and positive methods of cure. Among the systems of therapeutics based entirely upon drugless methods may be mentioned mechanical and hand massage, suggestive therapeutics, electro-therapeutics, vibration, hydrotherapy, hot air, X-ray, violet or ultra-violet rays, electric-light baths, thermal baths, static, Galvanic, and Faradic electricity. Of all these probably none are so popular or effective as the electric treatments, because of the variety of ways in which they may be administered. Much still remains to be learned in order to tell definitely what electricity really is; yet we know that it is a natural force that has always existed, found in the atmosphere surrounding us, within our own bodies in greater or less degree, and generated in every motion and

every chemical process, producing heat, light, concussion, and other chemical changes.

That patients suffering from nervous affections are peculiarly sensitive to electricity is generally conceded, and in treating such care should be taken to select the treatment least irritating and most adapted to their individual needs. As the object is to soothe nerve activity rather than to excite, in all cases the patient's general condition, temperament, etc., should be considered. As each one is "a law unto himself" and one patient can bear an amount of treatment that another cannot, a safe rule seems to be to begin with a very mild current and gradually increase as the case requires.

To speak briefly of some of the methods of electrical treatment in nervous diseases, we may glance first at the X-ray, which has long been used in general medical practice to demonstrate displacement and abnormal condition of organs, detection of fracture, dislocations, and foreign bodies, in treating cancer and lupus, and in nervous conditions to determine whether the displacement of any organ was the cause of nerve-pressure. The electric-light baths have proven of great benefit to those persons where elimination through the skin is desired or who are unable to stand the exhaustion of a Turkish bath or inhalation of overheated air or vapor. In nearly every neurasthenic the skin is in a dry, rough condition, the bowels constipated, urine scanty, sleep impaired. One of the first and most important things, then, is to secure a thorough elimination of effete matter through the pores of the skin, as an adjunct to treatment for bowel and urinary activity. Very rarely is it found that a patient cannot endure this treatment. In these baths the chemical action of the ray is used instead of the electric current. The rays are concentrated and reflected upon the body until every cell is bathed in light, penetrating the deepest tissues and stimulating the vital forces. The red light produces heat and the violet controls growth and life of cell-tissue, stimulating the sluggish cells, promoting circulation. In this way blood is brought back to exhausted nerve-centres, restoring natural force and strength. Perspiration becomes profuse after a few minutes, yet the after effect of the bath is one of extreme exhilaration. The method of giving the bath is very simple. The apparatus consists of a cabinet lined with mirrors and studded with incandescent electric lights. The patient sits upon a chair in the centre, and the cabinet is closed, completely covering the body, except the head. Before entering the bath, pulse, temperature, and respiration are taken, and the patient is allowed to drink plenty of cool (not cold) water. While in the bath cool cloths or ice-cap to head, pulse at temple watched carefully, and temperature taken just before coming out. Length of time for bath,

usually five to eight minutes. It is followed by a spray bath, temperature about 100° F., and an alcohol rub. In some cases also a gentle massage.

Thermal baths, in which the water is charged with electricity, are used more frequently in rheumatism, gout, and for sluggish portal circulation, but with a mild current are considered excellent for some forms of nervous disorder as a general tonic.

Static or frictional electricity varies from other forms in that it has higher tension or pressure, power to pass through resisting substances, as air, making a spark of light, and has no chemical action. Used by most physicians as a general nerve-tonic, and when given with breeze (current with sparks) it acts as a nerve-sedative. Galvanism, the continuous current, is used largely in neuralgia, to reduce size of tumors, to relieve pain, develop muscles, stimulate absorption, and excite or soothe nerves, as the case requires. When a strong, uninterrupted current is applied to the body it produces at the point of contact severe burning pain, redness, and finally, under the negative pole, vesication. These phenomena are the result of electrolytic changes induced by the current. Muscular contraction results only during the opening and closing of the circuit. It is of great value in paralysis where the exciting cause has ceased to act and the damage done is not irreparable, but in hemiplegia following apoplexy it should not be applied until all evidences of cerebral irritation have subsided. In paralysis from lesions of the peripheral nerves, such as neuritis, unless the damage done is great, much may be hoped from the application of galvanism.

Faradism is an induced, broken, and alternating current, running first in one direction and then in another. It practically does not produce chemical action, but produces tonic muscular contraction as long as the current is continued. It causes a tingling sensation followed by numbness. Its use is indicated in liver troubles, constipation, insomnia; where tonic influence is required, as in neurasthenia, hysteria, myelitis, and various sclerotic affections of the spinal cord; where contraction and stimulation of muscular growth is required, and where the circulation needs stimulating, increasing the flow of blood.

Of the above treatments perhaps the application of the last two mentioned will be the ones most frequently used by the nurse. Many a sleepless night may be avoided and the general welfare and comfort of the patient augmented by an intelligent use of the battery. Having a good general knowledge of the anatomy and physiology of the human body and the principles of electricity in general, bear in mind the object you wish to obtain, also that

- (a) The negative pole increases nerve excitability;
- (b) The positive pole diminishes nerve excitability.

A few landmarks are:

A general treatment should last twenty to thirty minutes, not longer, and consists of an application to feet and legs, hands and arms, chest, abdomen, and back.

A local treatment should last ten to fifteen minutes, according to the part treated.

Begin with milder current and gradually increase. Always have the sponges *wet* in *hot* water, and do not let them become cold and clammy. If the foot-plate is used, cover with a wet, warm cloth to avoid giving the patient an unpleasant shock from direct contact with the metal. As in other treatments, avoid exposure of patient. Give a brisk rub to parts after application.

To instruct nurses in the art of applying electricity is not the object of this article, but that it may assist some nurse in the relief of her patient, when such treatment has been ordered by the physician, I will give as an example two of the most common forms of local treatment—namely, for constipation and insomnia.

For constipation, using the Faradic battery:

Place patient in recumbent position with limbs flexed. Keep covered. Have battery and appliances ready. Place foot electrode attached to a positive pole and covered with *warm, wet* cloth at base of spine; with the negative electrode (sponge) wet in hot water, begin upon abdomen, in the hypogastric region, near right iliac fossa. Move the sponge *slowly*, with a sufficiently strong current to contract the muscles, up and across, then down and across, the colon. Where bowel action is desired at once, do not use foot-plate, but attach rectal electrode to positive pole, warm, grease, and insert in rectum. Treat ten minutes if for local treatment. For chronic constipation repeat daily for three to four weeks. When massage is combined with it much shorter time is necessary to procure desired results.

For insomnia, using Faradic battery:

Place patient on face, being covered warmly. Place negative electrode in hand and apply positive over entire length of spine—*i.e.*, over nerve-centres each side of spine, and especially over those controlling blood supply to head, the object being to draw blood from head and soothe nerve irritability.

RHEUMATISM.—Dr. G. Morton Illman, in an article in *American Medicine*, believes that rheumatism is closely associated with an abnormal condition of the gastro-intestinal tract. He therefore holds that the treatment of the condition should not be reduced purely and simply to the administration of salicylates.